

## PATENT ABSTRACTS OF JAPAN

(11)Publication number:

10-223897

(43) Date of publication of application: 21.08.1998

(51)Int.CI.

HO1L 29/78 HO1L 21/28 HO1L 21/316 HO1L 21/3205 HO1L 21/768

(21)Application number: 09-033208

(71)Applicant: NIPPON STEEL CORP

(22) Date of filing:

31.01.1997

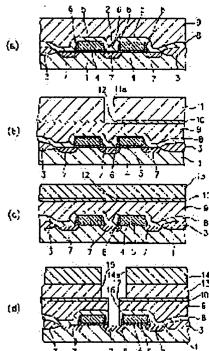
(72)Inventor: TAKUBI ATSUSHI

## (54) SEMICONDUCTOR DEVICE AND ITS MANUFACTURE

(57)Abstract:

PROBLEM TO BE SOLVED: To form easily and with reliability connection holes and wiring layers by photolithography using high-resolution resist.

SOLUTION: Interlayer insulating films 8 and 9 are formed which cover gate electrode films 5 and impurities diffusion layers 7. A silicon nitride film 10 is formed on the interlayer insulating film 9 which exhibits a lower etching speed and a smaller film thickness than the interlayer insulating films 8 and 9. A hole 12 is made in the silicon nitride film 10 with a diameter equal to a desired contact hole. An interlayer insulating film 13 is formed on the silicon nitride film 10. A wiring slot 15 wider than the diameter of the hole is formed in the interlayer insulating film 13. A contact hole 16 in analogy



to the hole 12 is formed in the interlayer insulating films 8 and 9 by using the silicon nitride film 10 as a mask.

## **LEGAL STATUS**

[Date of request for examination]

[Date of sending the examiner's decision of